Accton

Making Partnership Work

USB Hub
Quick Installation Guide

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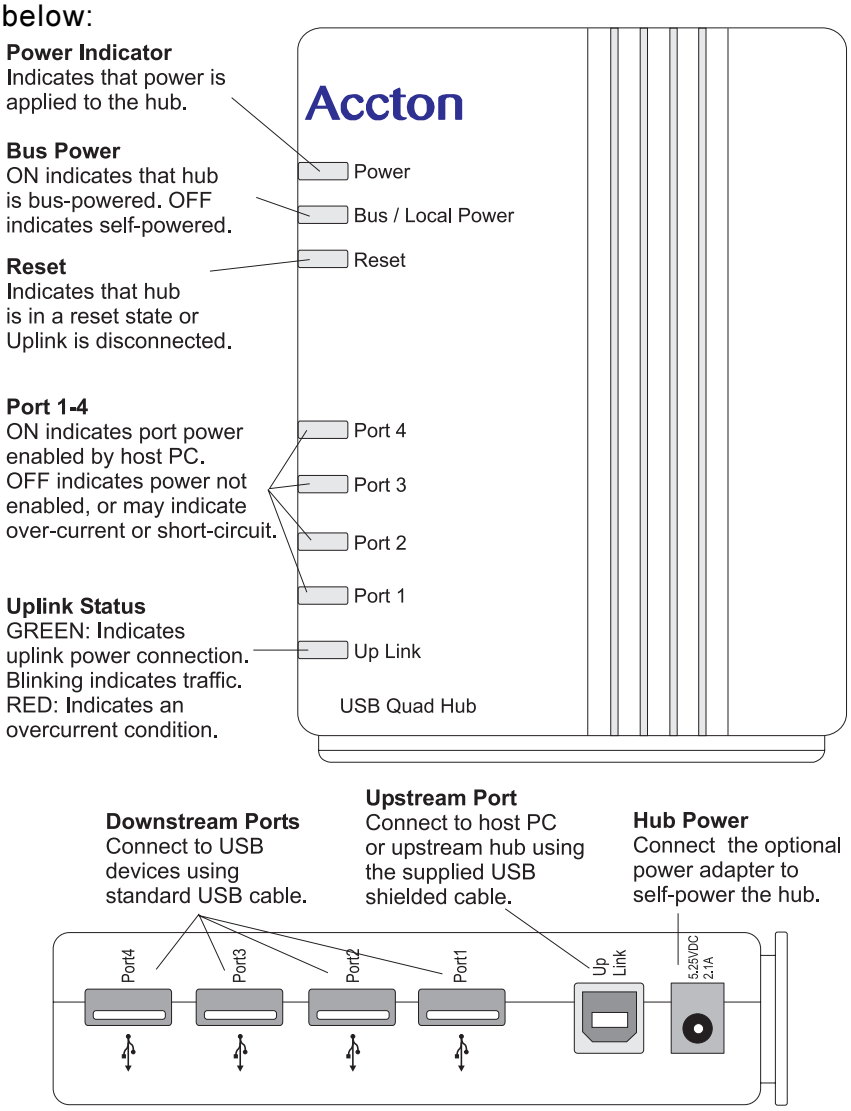
Introduction

Accton's USB204A offers a convenient and cost-effective means of bringing Universal Serial Bus (USB) connectivity to the desktop. Accton's Universal Serial Bus products feature true plug-and-play connection of PC peripherals "outside the box" and mark a significant advance in desktop cable management. These state-of-the-art, practical products provide ease-of-use benefits to PC users in the home, office, and on the road.

The USB204A provides 4 downstream ports, for connection to USB-equipped peripherals (including other hubs), and 1 upstream port for connection to your PC's USB port, or to another USB204A. The hub features a compact case with EZ-mount bracket for upright, flat, wall, or under-desk mounting. Five USB hubs can be daisy-chained together in series, supporting any combination of devices up to a maximum of 127 (including the hubs).

The components of the USB204A are shown in the figure below:


Power Indicator
Indicates that power is applied to the hub.
Bus Power
ON indicates that hub is bus-powered. OFF indicates self-powered.
Reset
Indicates that hub is in a reset state or Uplink is disconnected.
Port 1-4
ON indicates port power enabled by host PC. OFF indicates power not enabled, or may indicate over-current or short-circuit.
Uplink Status
GREEN: Indicates uplink power connection. Blinking indicates traffic. RED: Indicates an overcurrent condition.
Accton
Power
Bus / Local Power
Reset
Port 4
Port 3
Port 2
Port 1
Up Link
USB Quad Hub
Downstream Ports
Connect to USB devices using standard USB cable.
Upstream Port
Connect to host PC or upstream hub using the supplied USB shielded cable.
Hub Power
Connect the optional power adapter to self-power the hub.
Port4
Port3
Port2
Port1
Up Link
5.25VDC 2.1A

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Check the Package

The USB204A includes:

- 1 USB204A
- 1 hub stand
- 1 user guide
- 2-meter shielded USB cable
- 1 power adapter
- 1 registration card (please return)

System Requirements

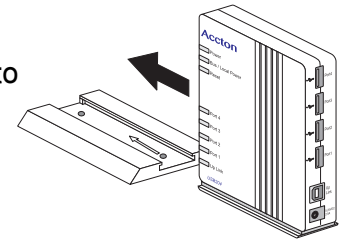
The USB204A requires the following basic host PC features to operate:

- A host PC that supports the Universal Serial Bus (USB)
- A PC operating system with a generic USB hub driver, including Microsoft Windows 95 (OSR2.1 or later), 98, 2000

Mount the Hub

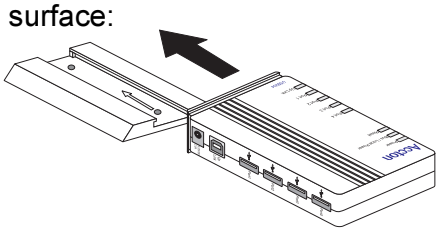
The USB204A with its flexible stand can be mounted on any flat or vertical surface.

To mount the hub on a flat surface:



1 Slide the stand onto the hub base (to stand upright) or back (to lay flat).
2 Place the hub on any convenient flat surface, such as a desktop or nearby shelf.

To mount the hub on a vertical surface:



1 First secure the stand to the desired location, such as a wall or side of desk. You may use two small screws, Velcro™ strips, or any other technique.
2 With the stand secured, slide the hub's back onto the stand.

Hub Operation

The USB204A is a device used to extend the host PC USB interface. The hub supplies 4 additional USB ports to attach to devices or other hubs.

The host PC has the ability turn on or off any hub, individual port, or a device attached to a port. The USB204A also supports the energy-saving suspend, resume and remote wake-on-ring functions. What's more, the Hub and each downstream port are overcurrent and short-circuit protected.

Please note the following general points about USB hub operation:

- Hubs and devices are hot pluggable and can be connected/ disconnected at any time, even while the host PC is powered on.

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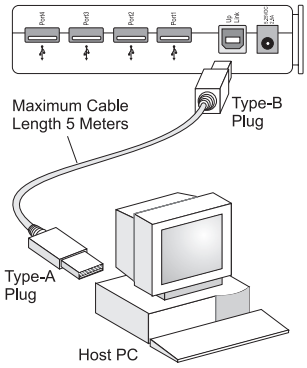
- Hubs can be daisy-chained up to 5 deep in series, or in any combination that does not exceed 127 devices.
- Hubs are dual-powered devices. They can be powered via the uplink connection (bus-powered), or by an optional power supply (self-powered).
- When bus-powered, downstream ports support only “low-power” devices, such as a mouse, keyboard or a self-powered hub.
- When self-powered, downstream ports can support “high-power” devices, such as a printer or a bus-powered hub.

Note: A USB204A must be self-powered by an optional power adapter to daisy-chain to another hub that is only bus-powered.

Connect the Hub to the Host PC

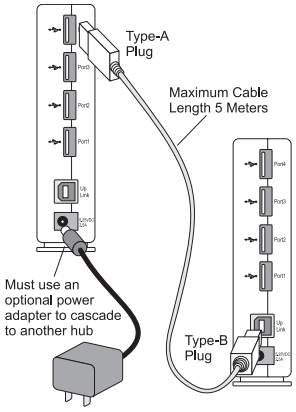
The USB204A should be connected directly a host PC’s USB port. The hub only has to be plugged in to the host USB connector to operate. Up to 4 other hubs can then be daisy-chained in series from the first hub.



1. Prepare standard shielded 90Ω USB cable with Type-A (upstream) and Type-B (downstream) plugs on each end. The maximum cable length is 5 meters (16.4 feet).
2. Connect the Type-A end of the cable to the host PC’s USB port and the Type-B end to the hub.
3. Check that the hub’s upstream port LED is green. If this LED is red or off, then follow the advice in the section “Troubleshooting” to diagnose the problem.

Connect Devices to the Hub

Before connecting devices to the hub, check the USB interface requirements. Devices can be “low-power” or “high-power,” with “low-speed” or “full-speed” signaling. The USB204A is a high-power, full-speed device. Refer to instructions supplied with each USB device for their individual operation.



1. Prepare standard 90Ω USB cable with Type-A (upstream) and Type-B (downstream) plugs on each end.

Low-Speed Devices:	Shielded or unshielded 90Ω USB cable
Full-Speed Devices:	Shielded 90Ω USB cable
Cable Length:	Maximum 3 m (9.8 ft) for unshielded cable Maximum 5 m (16.4 ft) for shielded cable

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2. Connect the Type-A end of the cable to one of the hub's downstream ports and the Type-B end to the USB device.
3. Check that the hub's downstream port (green) LED is on. If this LED is off, then follow the advice in the section "Troubleshooting" to diagnose the problem.

Troubleshooting

The USB204A can be easily monitored through its indicators. You should be able to quickly resolve any problem by following the troubleshooting steps listed below. If you cannot solve the problem, contact your Accton distributor for further assistance.

General Problems

Many problems and error conditions can be cleared by first following these steps:

1. Ensure all upstream cables are properly connected and that all upstream hubs and the host PC are powered on.
2. Be sure the host PC and hub are not in suspend mode by pressing any key on the keyboard or moving the mouse.
3. Disconnect devices from the hub and reset the hub. To reset the hub, simply unplug the uplink connection and then plug it back in.

Uplink Port LED is Red

This indicates an overcurrent condition exists.

1. Disconnect devices on downstream ports 1 through 4 one at a time until the LED turns green. The last device disconnected is causing the overcurrent condition.
2. If the LED is still red with all devices removed, reset the hub by unplugging the uplink connection and plugging it back in. If the LED remains red the unit is defective and should be replaced.

A Single Downstream Port LED is Off

The port has been disabled by the host PC. An overcurrent condition may exist on the port, or the device driver identified a problem with the device and turned the port off.

1. Disconnect the device. If the port LED does not turn on, reset the hub. If the LED then turns on, you can reattach the device.
2. If the LED does not turn on after the hub reset, you may have to reboot the host PC.

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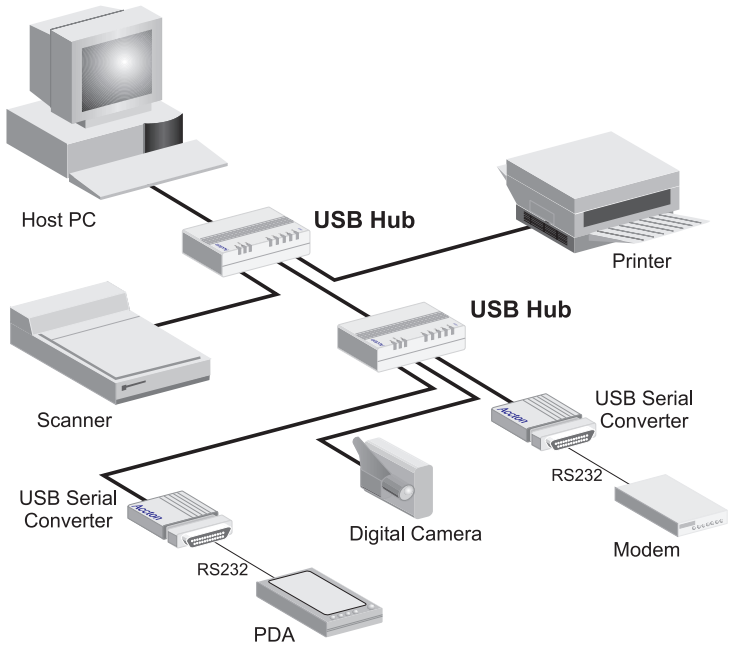
USB Application Diagram



EMI Warning

FCC Class B Certification

Accton Technology Corporation
Model Numbers: *USB204A*
FCC ID: *HED4000USB*

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Warning: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

· Reorient or relocate the receiving antenna
· Increase the separation between the equipment and receiver
· Connect the equipment into an outlet on a circuit different from the one which the receiver is connected to
· Consult the dealer or an experienced radio/TV technician for help

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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You may use shielded USB cable.

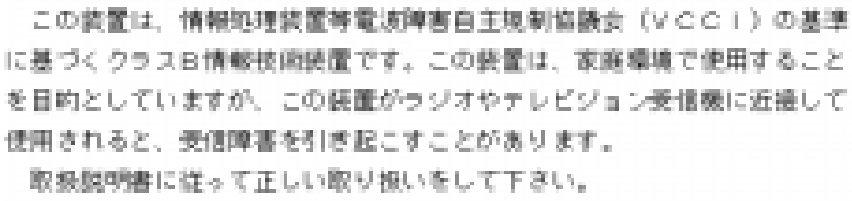
Note: In order to maintain compliance with the limits of a Class B digital device, Accton requires that you use a quality interface cable when connecting to this device. Changes or modifications not expressly approved by Accton could void the user's authority to operate this equipment. Suggested cable type is 90Ω USB cable.

Canadian Standards Association (CSA) Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled “Digital Apparatus”, ICES-003 of the Department of Communications.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur : “Appareils Numérques”, NMB-003 édictée par le ministère des Communications.

Voluntary Control Council for Interference (VCCI-B)


この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準
に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用すること
を目的としていますが、この装置がラジオやテレビジョン受信機に近接して
使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

EN55022 Declaration of Conformance

This is to certify that the USB Hub is shielded against the generation of radio interference in accordance with the application of Council Directive 89/336/EEC, Article 4a. Conformity is declared by the application of EN55022:1987 Class B (CISPR 22:1985/BS 6527:1988).

CE Mark Declaration of Conformance

This is to certify that this product complies with ISO/IEC Guide 22 and EN45014. It conforms to the following specifications:

EMC:	EN55022(1988)/CISPR-22(1985)	class B
	IEC 1000-4-2(1995)	4kV CD, 8kV AD
	IEC 1000-4-3(1995)	3V/m
	IEC 1000-4-4(1995)	1kV - (power line) 0.5kV - (signal line)
	IEC 1000-4-6(1995)	3Vrms

This product complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC.

Safety Compliance

Underwriters Laboratories Compliance Statement

Important! Before making connections, make sure you have the correct Cord Set. Check it (read the label on the cable) against the following specification list.

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Voltage	Cord Set Specifications
120 Volts	UL Listed/CSA Certified Cord Set
	Minimum 18 AWG; type SVT or SJT three conductor cord
	Maximum length of 15 feet
	Parallel blade, grounding type attachment plug rated 15A, 125V
240 Volts	UL Listed/CSA Certified Cord Set
(North America)	Minimum 18 AWG; type SVT or SJT three conductor cord
	Maximum length of 15 feet
	Tandem blade, grounding type attachment plug rated 15A, 125V
240 Volts (Europe only)	Cord Set with H05VV-F cord having three conductors with minimum diameter of 0.75 mm²
	IEC-320 receptacle; male plug rated 10A, 250V

Wichtige Sicherheitshinweise *(German Safety Statement)*

1. Bitte lesen Sie diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssi-goder Aerosolreiniger. Am besten eignet sich ein angefeuchtetes Tuch zur Reinigung.
4. Die Netzanschlu ßsteckdose soll nahe dem Gerät angebracht und leicht zugänglich sein.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sicheren Stand zu achten. Ein Kippen oder Fallen könnte Beschädigungen hervorrufen.
7. Die Belüftungsöffnungen dienen der Luftzirkulation, die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
10. Alle Hinweise und Warnungen, die sich am Gerät befinden, sind zu beachten.
11. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
12. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
13. Öffnen sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von authorisiertem Servicepersonal geöffnet werden.
14. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
    a. Netzkabel oder Netzstecker sind beschädigt.
    b. Flüssigkeit ist in das Gerät eingedrungen.
    c. Das Gerät war Feuchtigkeit ausgesetzt.
    d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
    e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
    f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
15. Stellen Sie sicher, daß die Stromversorgung dieses Gerätes nach der EN 60950 geprüft ist. Ausgangswerte der Stromversorgung sollten die Werte von AC 7,5-8V, 50-60Hz nicht über oder unterschreiten sowie den minimalen Strom von 1A nicht unterschreiten.

Der arbeitsplatzbezogene Schalldruckpegel nach DIN 45 635 Teil 1000 beträgt 70dB(A) oder weniger.

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Product Specifications

Standards Conformance	Universal Serial Bus Specification 1.0
Number of Ports	4 USB Type-A (downstream) ports 1 USB Type-B (upstream) port
Dimensions	120 x 96 x 28 mm (4.74 x 3.78 x 1.1 in)
Weight	316 g (11.1 oz)
System Requirements	A PC that supports the Universal Serial Bus An operating system with a generic USB hub driver, including Windows 95 (OSR2.1 or later), 98, 2000, and iMac
Power Requirements	
Bus-Powered Mode	2.5W, 5 VDC at 0.5A max. (from USB host controller)
Self-Powered Mode	11W, 5.25 VDC at 2.5A max. (100-240 VAC, 50/60 Hz from optional adapter)
Maximum Current	2.1A @ 5.25 VDC (from adapter)
Cable Wiring	
Full-Speed Devices	90Ω shielded USB cable
Low-Speed Devices	90Ω shielded or unshielded USB cable
Maximum Length	5 m (16.4 ft) for shielded cable, 3 m (9.8 ft) for unshielded
Maximum Devices	127 (5 hubs in daisy-chain, 6 cables end-to-end max.)
Access Method	Differential and bi-directional per USB spec. 1.0 12 Mbps full speed, 1.5 Mbps low speed
Status LEDs	Power, Bus/Local, Reset, Port 1-4 (on=power,off=failure), Uplink (green=power/activity, red=overcurrent)
Environmental	
Temperature	0° - 40°C / 32° - 104°F (Standard Operating) -20° - 70°C / -4° - 160°F (Storage)
Humidity	5 - 95% (Noncondensing)
Certification	CE Mark
Emissions	FCC Class B, VCCI Class B, CISPR Class B
Safety	UL

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Warranty

Accton warrants to the original owner that the product delivered in this package will be free from defects in material and workmanship for a period of three (3) years from the date of purchase from Accton or its authorized reseller. For the warranty to apply, you must register your purchase by returning the registration card indicating the date of purchase and including proof of purchase. There will be a minimal charge to replace consumable components, such as fuses, power transformers, and mechanical cooling devices. The warranty does not cover the product if it is damaged in the process of being installed. Accton recommends that you have the company from whom you purchased this product install it.

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Accton

International Headquarters
No. 1 Creation Road III,
Science-based Industrial Park
Hsinchu 300, Taiwan, R.O.C.
Phone: 886-3-5770-270
FAX: 886-3-5770-267
Internet: support@accton.com.tw

USA Headquarters
P.O. Box 51420
Irvine, CA 92619-1420
Phone Numbers -
Sales: 888-398-2101 or 949-707-4800
Support: 888-398-4101 or 949-707-4847
RMA: 888-398-3101 or 949-707-4828
FAX: 949-707-2460

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